



FSUB 10478.2  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of Robert A. Holton

Art Unit 1625

Serial No. 10/673,300

Filed September 29, 2003

Confirmation No. To Be Assigned

For PREPARATION OF SUBSTITUTED ISOSERINE ESTERS USING  $\beta$ -LACTAMS  
AND METAL OR AMMONIUM ALKOXIDES

December 22, 2003

TO THE COMMISSIONER FOR PATENTS,

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SIR:

**INFORMATION DISCLOSURE STATEMENT**

In accordance with 37 C.F.R. 1.97 and 1.98 and MPEP 609, and in compliance with the duty of disclosure set forth in 37 C.F.R. 1.56, applicant submits a copy of reference 8 listed on the attached PTO/SB/08A for consideration by the Patent and Trademark Office in the above-entitled application and to be made of record therein. Copies of references 1-7 and 9-21 have not been provided in accordance with MPEP 609 and 37 C.F.R. § 1.98(d) because they are of record in prior application Serial No. 10/194,343, filed July 12, 2002, now U.S. Patent 6,653,490 B2 relied upon for an earlier filing date under 35 U.S.C. § 120.

Respectfully submitted,

Edward J. Hejlek, Reg. No. 31,525  
SENNIGER, POWERS, LEAVITT & ROEDEL  
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Attachment

Express Mail Label No. EL 998651246 US

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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First Named Inventor	Robert A. Holton
Group Art Unit	1625
Examiner Name	B. Trinh
Attorney Docket No.	FSUB 10478.2

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**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code <sup>2</sup> (if known)		
	1	5,175,315		Holton	12-29-1992
	2	5,430,160		Holton	07-04-1995
	3	5,466,834		Holton	11-14-1995
	4	5,717,115		Holton	02-10-1998
	5	6,069,260		Holton	05-30-2000
	6	6,124,481		Holton	09-26-2000
	7	6,458,977	B1	Holton	10-01-2002
	8	6,653,490	B2	Holton	11-25-2003

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T <sup>6</sup>
		Office	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)			
	9	EP	0400971	A2	Florida State University	12-05-1990	
	10	WO	93/06079	A1	Florida State University	04-01-1993	

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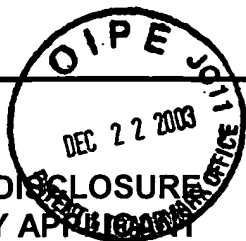
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Attorney Docket No.	FSUB 10478.2

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**OTHER ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	11	AOYAMA et al. "Photochemical Reactions of N-Benzoylformyl-N-(Phenylthiocarbonyl)-Amines. A Novel Photocyclization Involving 1,4-Phenylthio Migration" Tetrahedron Letters (1983), pp. 1169-1170, Vol. 24, No. 11, XP002224840, Elsevier Science Publishers, Amsterdam, NL	
	12	FRAPPIER et al. "Alcaloïdes Peptidiques-X <sup>a</sup> . Approche de la Synthèse des Alcaloïdes Peptidiques 1. Réactivité de N-Tosyláziridines Vis-à-Vis de Réactifs Nucléophiles" Tetrahedron (1978), pp 2911-2916, Vol. 34, No. 19, XP002224841, Elsevier Science Publishers, Amsterdam, NL	
	13	JUST et al. "Beta-Lactams. XI. Synthesis of N-Phosphorylated Mono- and Bicyclic Beta-Lactams <sup>1</sup> " Canadian Journal of Chemistry (1983), pp. 1730-1735, Vol. 61, No. 8, XP002224842, National Research Council, Ottawa, CA	
	14	OJIMA et al. "A Highly Efficient Route to Tacotere by the Beta-Lactam Synthon Method" Tetrahedron Letters (1993-06-25), pp 4149-4152, Vol. 34, No. 26, XP000561213, Elsevier Science Publishers, Amsterdam, NL	
	15	Ojima et al. "Efficient and Practical Asymmetric Synthesis of the Taxol C-13 Side Chain, N-Benzoyl-(2R,3S)-3-phenylisoserine, and Its Analogues via Chiral 3-Hydroxy-4-aryl-β-lactams through Chiral Ester Enolate-Imine Cyclocondensation" Journal of Organic Chemistry, Vol. 56, No. 5 (1991) pp. 1681-1683.	
	16	Ojima et al. "N-Acyl-3-Hydroxy-β-Lactams as Key Intermediates for Taxotere and its Analogs" Bioorganic and Medicinal Chemistry Letters, Vol. 3, No. 11 (1993) pp. 2479-2482.	
	17	Ojima et al. "New and Efficient Approaches to the Semisynthesis of Taxol and its C-13 Side Chain Analogs by Means of β-Lactam Synthon Method" Tetrahedron Letters, Vol. 48, No. 34 (1992) pp. 6985-7012.	
	18	Ojima et al. "Synthesis and Biological Activity of 3'-alkyl- and 3'-alkenyl-3'-dephenyldocetaxels" Bioorganic and Medicinal Chemistry Letters, Vol. 4, No. 21 (1994) pp. 2631-2634.	

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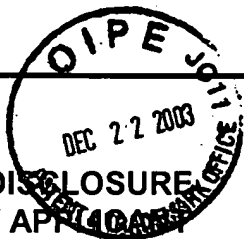
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19	OJIMA et al. "Synthesis and Structure-Activity Relationships of Novel Nor-Seco Analogs of Taxol and Taxotere" Journal of Organic Chemistry (1994-02-11), pp 515-517, Vol. 59, No. 3, XP001094357, American Chemical Society, Washington, DC
20	Ojima et al. "Synthesis of Novel 3'-Trifluoromethyl Taxoids Through Effective Kinetic Resolution of Racemic 4-CF <sub>3</sub> -β-Lactams with Baccatins, Chirality, Vol. 9 (1997) pp. 487-494.
21	PALOMO et al. "Highly Stereoselective Synthesis of Alpha-Hydroxy Beta-Amino Acids Through Beta-Lactams: Application to the Synthesis of the Taxol and Bestatin Side Chains and Related Systems" Tetrahedron Letters (1990-10-22), pp 6429-6432, Vol. 31, No. 44, XP002224788, Elsevier Science Publishers, Amsterdam, NL

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